CLAIMS:

What is claimed is:

1. A method in a data processing system for determining an optimal capacity of a server within a set of servers, the method comprising:

dynamically collecting resource use and units of work data from the server; and

identifying the optimal capacity for the server using the resource use and unit of work data from the server.

2. The method of claim 1 further comprising:

directing connection requests to servers within the set of servers using the optimal capacity for the server.

3. The method of claim 1, wherein the resource use and unit of work data is collected in response to an event.

4. The method of claim 3, wherein the event is a periodic event.

5. The method of claim 1, wherein optimal capacity is identified as follows:

Ei = Di1/Di2

Ri = Ei/(E1 + E2 . . . En)

Pi = Ri * 100

wherein, Ei is an efficiency of server i; Ri is a relative efficiency of server i; Pi is the optimal

capacity of server i; n is a number of servers in the set of servers; Di1 is an average number of units of work handled by server i since the last time data was sent to the data processing system; and Di2 is an average resource use for server i since the last time data was sent to the data processing system.

6. The method of claim 1, wherein the set of servers are located in a local area network.

7. The method of claim 1, wherein the set of servers are a set of virtual servers located on the data processing system.

8. The method of claim 1, wherein the resource use includes at least one of processor use, memory use, and bandwidth use.

9. The method of claim 1, wherein the unit of work data includes at least one of a number of packets and a number of connections.

10. The method of claim 1 further comprising:
sending the optimal capacity to the server.

11. The method of claim 10 further comprising:
sending, by the server, the optimal capacity to a load balancer, wherein the load balancer directs connection requests to the set of servers using the optimal capacity.

12. A method in a data processing system for determining an optimal capacity of the data processing system server, the method comprising:

tracking resource use and units of work since a last collection of resource use and units of wok data from a server;

sending the resource use and units of work performed data to a server in response to an event; and

receiving an identification of an optimal capacity from the server in response to sending the resource use and units of work performed data.

13. The method of claim 12 further comprising:

sending the identification received from the server to a load balancer.

14. The method of claim 12, wherein the resource use includes at least one of processor use, memory use, and bandwidth use.

15. The method of claim 12, wherein the units of work includes at least one of a number of packets and a number of connections.

16. The method of claim 12, wherein the server identifies optimal capacity for a set of servers including the data processing system and further comprising:

responsive to an absence of a reception of an identification of the optimal capacity within a selected amount of time, initiating a process to replace the

server and perform identifications of optimal capacity for the set of servers.

17. A data processing system comprising:

a bus system;

a communications unit connected to the bus, wherein data is sent and received using the communications unit;

a memory connected to the bus system, wherein a set of instructions are located in the memory; and

a processor unit connected to the bus system, wherein the processor unit executes the set of instructions to dynamically collect resource use and units of work data from the server; and identify an optimal capacity for the server using the resource use and unit of work data from the server.

18. The data processing system of claim 17, wherein the bus system includes a primary bus and a secondary bus.

19. The data processing system of claim 17, wherein the processor unit includes a single processor.

20. The data processing system of claim 17, wherein the processor unit includes a plurality of processors.

21. The data processing system claim 17, wherein the communications unit is an Ethernet adapter.

22. A data processing system comprising:

a bus system;

a communications unit connected to the bus, wherein

data is sent and received using the communications unit;

a memory connected to the bus system, wherein a set of instructions are located in the memory; and

a processor unit connected to the bus system, wherein the processor unit executes the set of instructions to track resource use and units of work since a last collection of resource use and units of wok data from a server; send the resource use and units of work performed data to the server in response to an event; andreceive an identification of an optimal capacity from the server in response to sending the resource use and units of work performed data.

23. A data processing system for determining an optimal capacity of a server within a set of servers, the data processing system comprising:

collecting means for dynamically collecting resource use and units of work data from the server; and

identifying means for identifying an optimal capacity for the server using the resource use and unit of work data from the server.

24. The data processing system of claim 23 further comprising:

directing means for directing connection requests to servers within the set of servers using the optimal capacity for the server.

25. The data processing system of claim 23, wherein the resource use and unit of work data is collected in response to an event.

26. The data processing system of claim 25, wherein the event is a periodic event.

27. The data processing system of claim 23, wherein optimal capacity is identified as follows:

Ei = Di1/Di2

Ri = Ei/(E1 + E2 . . . En)

Pi = Ri * 100

wherein, Ei is an efficiency of server i; Ri is a relative efficiency of server i; Pi is the optimal capacity of server i; n is a number of servers within the set of servers; Di1 is an average number of units of work handled by server i since the last time data was sent to the data processing system; and Di2 is an average resource use for server i since the last time data was sent to the data processing system.

28. The data processing system of claim 23, wherein the set of servers are located in a local area network.

29. The data processing system of claim 23, wherein the set of servers are a set of virtual servers located on the data processing system.

30. The data processing system of claim 23, wherein the resource use includes at least one of processor use, memory use, and bandwidth use.

31. The data processing system of claim 23, wherein the unit of work data includes at least one of a number of packets and a number of connections.

32. The data processing system of claim 23 further comprising:

first sending means for sending the optimal capacity to the server.

33. The data processing system of claim 32, wherein the sending means is a first sending means and further comprising:

second sending means for sending, by the server, the optimal capacity to a load balancer, wherein the load balancer directs connection requests to the set of servers using the optimal capacity.

34. A data processing system for determining an optimal capacity of the data processing system server, the data processing system comprising:

tracking means for tracking resource use and units of work since a last collection of resource use and units of wok data from a server;

first sending means for sending the resource use and units of work performed data to the server in response to an event; and

receiving means for receiving an identification of an optimal capacity from the server in response to sending the resource use and units of work performed data.

35. The data processing system of claim 34, wherein the sending means is a first sending means and further comprising:

second sending means for sending the identification received from the server to a load balancer.

36. The data processing system of claim 34, wherein the resource use includes at least one of processor use, memory use, and bandwidth use.

37. The data processing system of claim 34, wherein the units of work includes at least one of a number of packets and a number of connections.

38. The data processing system of claim 34, wherein the server identifies optimal capacity for a set of servers including the data processing system and further comprising:

initiating means, responsive to an absence of a reception of an identification of an optimal capacity within a selected amount of time, for initiating a process to replace the server and perform identifications of optimal capacity for the set of servers.

39. A computer program product in a computer readable medium for determining an optimal capacity of a server within a set of servers, the computer program product comprising:

first instructions for dynamically collecting resource use and units of work data from the server; and

second instructions for identifying the optimal capacity for the server using the resource use and unit of work data from the server.

40. A computer program product in a computer readable medium for determining an optimal capacity of the data processing system server, the computer program product comprising:

first instructions for tracking resource use and units of work since a last collection of resource use and units of wok data from a server;

second instructions for sending the resource use and units of work performed data to the server in response to an event; and

third instructions for receiving an identification of an optimal capacity from the server in response to sending the resource use and units of work performed data.